Listing of the Claims

1. (Currently Amended) A digital imaging device comprising:

an imaging subsystem for capturing video frames;

a motion sensor for detecting movement of said device; and

encoding logic for encoding video frames from said imaging subsystem according to a motion compensation compression algorithm, wherein said encoding logic determines motion vectors by displacing interframe search areas using information from said motion sensor;

at least two accelerometers disposed on opposite ends of a single wall to detect translation along an axis normal to a Cartesian plane containing the accelerometers; and

an adder coupled the accelerometers to sum a signal from one of the accelerometers with the inverse of a signal from the other of the accelerometers to generate a differential signal, the differential signal enabling detection of a change in angular orientation.

2. (Original) The device of claim 1 wherein said motion sensor generates information indicative of angular translation.

3. (Original) The device of claim 1 wherein said motion sensor generates information indicative of linear displacement.

4. (Original) The device of claim 1 wherein said encoding logic implements a function that calculates an estimated interframe pixel displacement using information generated by said motion sensor.

5. (Original) The device of claim 4 wherein said function is a linear function.

6. (Original) The device of claim 4 wherein said encoding logic is implemented within an application specific integrated circuit.

7. (Original) The device of claim 4 wherein said encoding logic is implemented using software instructions.

8. (Currently Amended) A method of compressing video images used in association with an image capture device, said method comprising:

receiving at least first and second video frames;

receiving motion information related to a movement of said device from at least one motion sensor;

selecting a reference block of pixels within said second frame;

selecting a search area within said first frame, wherein said search area is displaced from a position defined by said selected reference block using said motion information; [[and]]

determining an interframe motion vector by comparing said reference block of pixels within said second frame to pixels within said search area of said first frame;

generating a differential signal; and

detecting a change in angular orientation based on the differential signal.

9. (Original) The method of claim 8 further comprising:

determining a displacement vector from said motion information and originating at a position in said first frame associated with said reference block's position in said second frame, wherein said selecting said search area employs said displacement vector to locate said search area.

10. (Original) The method of claim 8 wherein said motion sensor is a gyroscopic sensor.

11. (Original) The method of claim 10 further comprising:

calculating a displacement vector by employing a small angle approximation for a function that receives information indicative of angular displacement using said gyroscopic sensor.

12. (Original) The method of claim 8 wherein said motion sensor is an accelerometer.

13. (Original) The method of claim 12 wherein said accelerometer is disposed within said image capture device to provide a signal voltage proportional to an acceleration of said device along an axis within an image capture plane.

14. (Original) The method of claim 12 wherein a plurality of accelerometers generate said motion information, wherein said plurality of accelerometers provide at least one differential signal that is indicative of angular translation of said image capture device.

15. (Original) The method of claim 12 wherein a plurality of accelerometers are disposed within said image capture device in respective Cartesian planes.

16. (Currently Amended) A system, comprising:

means for generating video images;

means for detecting motion of said system; [[and]]

means for encoding said video images according to a motion compensation compression algorithm, wherein said means for encoding displaces search areas during motion vector calculation in response to information received from said means for detecting; and

means for interspersing intracoded frames in the video images in a periodic manner to reduce the amount of coding noise associated with the motion compensation compression algorithm.

17. (Original) The system of claim 16 wherein said means for detecting comprises at least one accelerometer.

18. (Original) The system of claim 16 wherein said means for detecting generates at least one signal that is indicative of lateral translation of said system along an axis.

19. (Original) The system of claim 16 wherein said means for detecting generates at least one signal that is indicative of a change in angular orientation of said system.

20. (Original) The system of claim 16 wherein said means for encoding estimates an amount of pixel displacement between respective video frames in response to information received from said means for detecting.

21. (Currently Amended) A method, comprising:

generating video images by an imaging device;

detecting motion of said imaging device; [[and]]

encoding said video images according to a motion compensation compression algorithm, wherein said encoding displaces search areas during motion vector calculation in response to information received from said detecting; and

estimating pixel translation as a multiple of detected change in angular orientation.